Actiontec® Creative Solutions for the Digital Life™

Modular DSL Router

Actiontec's Modular DSL Router is the industry's first modular DSL residential modem/router, designed to equip broadband service providers with a single-SKU solution and potential revenue stream for consumer premises equipment. It enables telcos to supply all customers with the same low-cost base unit and then add user-requested upgrades such as wireless networking with snap-in expansion modules.

Modular for Easy Feature/Technology Upgrades

The base unit is a one-port Ethernet/USB ADSL2+ modem. An expansion port is included on top of the unit for attaching the wireless expansion module. All other add-on modules snap directly into the base unit with no cables, adapters, CDs or configuration required by the end user, making upgrades a simple plug-and-play process that can be handled by the consumer. Modular add-ons include a Wireless Expansion Module, 4-port Ethernet switch for wired networking, a HomePlug AV adapter for powerline networking, and a VoIP adapter.

Features

- Integrated Wired Networking using 1 Port USB and 1 Port 10/100 Mbps Ethernet
- Full-rate ADSL 2/2+ modem - supports data rates of up to 24 Mbps downstream and up to 1 Mbps upstream*
- Exceeds performance of the DSL Forum specification
- Loop reach of up to 18,000 feet using ADSL and 18,600 feet using ADSL 2
- Tested and compatible with all major DSLAMs
- Advanced security: Firewall, Stateful Packet Inspection, NAT, website blocking, web service blocking, Internet traffic logging, Denial of Service (DOS) protection

2007 TMC Communications Solutions Product Of The Year

Product Of The Year 2007 TMC Unified Communications

* Depends on the services offered by the Internet Service Provider.

Model # W1000

Assembled

Model # M1000

Model # V2000

- Other features include:
  - Advanced Modem Diagnostics
  - DHCP Server Option
  - Compliant with DSL Forum TR048 Rate and Reach Requirements
  - Customizable Firewall
  - DMZ Hosting
  - DNS Server, Relay
  - Dynamic Rate Adaptation
  - Independent upstream and downstream data rate provisioning
  - LAN IP Address Selection
  - Multiple PVC supported
  - NAT Services Blocking
  - Port Forwarding
  - Real-time diagnostics
  - Remote Management
  - Services Blocking
  - Static Routing
  - Unnumbered Mode Support
  - User Friendly GUI
  - VPN Pass Through
  - WAN IP & LAN IP Address Selection
  - Website Blocking

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Technical Specifications

Features	Descriptions
ADSL	• ITU G.992.1 (G.dmt), G.992.2 (G.Lite), G.994.1 (G.hs), G.992.3 (G.dmt.bis), G.992.4 (G.lite.bis), G.992.5 (ADSL2plus) • ANSI T1.413 Issue2
ATM	• ATM User-Network Interface, Version 3.1, Section 3. - The full VPI range (0 – 4095) and VCI range (1 – 65535) are supported. - Adaptation Layers AAL5, AAL2 and AAL0 are supported. - The traffic shaping function supports traffic classes CBR, VBR (real time and non-real time) and UBR (with PCR limiting).
OAM	• ITU-T Recommendation I.610 B-ISDN Operation and Maintenance Principles and Operations. - F5 segment and end-to-end loopback cells
Wireless Module	• IEEE 802.11g • IEEE 802.11b • IEEE 802.1x • WPA/WPA2 • WEP 64/128 bit encryption • SSID Broadcast enable/disable • WPS • WMM • Multi SSID (4) • Auto Channel Selection
VoIP Module	• 2 FXS ports for phone/fax connection • Modular/Stand-alone mode for Home/ On-the-Road use • Remote XML auto configuration • Remote auto firmware upgrade • Echo cancellation for clear calls • Major Codecs (G.711a/u-law, G.729A, G.729AB, G.726, G.723.1) • Caller-ID Type I/Type II • Call hold, call waiting, call forwarding, call transfer, 3-way conference • SIP/RTP packet TOS tagging
Ethernet	• ISO/IEC 8802-3; ANSI/IEEE standard 802.3 part 3. - IEEE 802.3x – Full Duplex capable - IEEE 802.3u – Auto negotiation • RFC 1213 "Management Information Base for Network management of TCP/IP-based internet: MIB-II". • D-I-X, "The Ethernet - A Local Area Network: Data Link Layer and Physical Layer Specifications".
Bridge	• Transparent MAC level bridge for Ethernet-like devices in conformance with the IEEE802.1d specification. • ISO/IEC 10038:1993 (E), Std 802.1D. • RFC1213 "Management Information Base for Network Management of TCP/IP-based internet: MIB-II". • RFC1493 "Definitions of Managed Objects for Bridges".
IP	• RFC 791 "Internet Protocol". • RFC 950 "Internet Standard Subnetting Procedure". • RFC 1122 "Requirements for Internet hosts – communication layers". • RFC 1191 "Path MTU discovery". • RFC 1213 "Management Information Base for Network Management of TCP/IP-based Internet". • RFC 894 "Standard for the transmission of IP datagrams over Ethernet networks".
ARP	• RFC 826 "Ethernet Address Resolution Protocol: Or converting network protocol addresses to 48.bit Ethernet address for transmission on Ethernet hardware".
ICMP	• RFC 792 "Internet Control Message Protocol".
UDP	• RFC 768 "User Datagram Protocol".
TCP	• RFC 793 "Transmission Control Protocol".
IP Router	• Support Static Route • Support unnumbered mode
RIP	• RFC 1058 "Routing Information Protocol". • RFC 1723 "RIP Version 2 - Carrying Additional Information". • RFC 2453 "RIP Version 2". • RFC 1812 "Requirements for IP Version 4 Routers". • RFC 1191 "Path MTU discovery".
DHCP Server	• RFC 2131 "Dynamic Host Configuration Protocol". • RFC 2132 "DHCP Options and BOOTP Vendor Extensions".
DHCP Client	• RFC 2131 "Dynamic Host Configuration Protocol". • RFC 2132 "DHCP Options and BOOTP Vendor Extensions". • The DHCP client supports the following minimal subset of options described in RFC2132: - Requested IP Address (requested by default; is mandatory) - Parameter Request list (subnet-mask only) - IP Address Lease time (dhcp-lease-time) - Client-identifier (dhcp-client-identifier) - Default route (routers) - DNS Proxy Server

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Technical Specifications (cont)

NAT, PAT (IP Masquerading)	• RFC2663 "IP Network Address Translator (NAT) Terminology and Considerations". • RFC3022 "Traditional IP Network Address Translator (Traditional NAT)".
NAT ALGs (Application Level Gateway) (NAT Pass Through)	• FTP (over NATP) • Gaming • Netmeeting • IPSec • PPTP
NAT advanced features	• Port Forwarding • DMZ • Service Blocking • Web site blocking • Web Activity Log
Firewall	• Stateful Firewall: multiple security levels. • Basic IDS: Stateful Packet Inspection for prevention of Denial of Service (DoS) attacks.
Universal Plug and Play (UPnP)	• Internet Gateway Device (IGD) Standardized Device Control Protocol V 1.0.
PPPoA	• RFC 2364 "PPP Over AAL5".
PPPoE	• RFC 2516 "Method for Transmitting PPP Over Ethernet (PPPoE)".
RFC1483	Supports bridged 802.3 Ethernet frames over an ATM network. • LLC encapsulation, in which an LLC/SNAP header is prepended to the (Ethernet) frame. • VC multiplexing, in which a null two byte header is prepended to the frame. Default is LLC encapsulation; VC multiplexing can be configured using console command or WEB configuration. • RFC1483 "Multiprotocol Encapsulation over ATM Adaptation Layer 5". • RFC1213 "Management Information Base for Network Management of TCP/IP-based internet: MIB-II". • RFC 2684 "Multiprotocol Encapsulation over ATM Adaptation Layer 5".
Web Server and Web Based Configuration	• RFC 1945 "Hypertext Transfer Protocol -- HTTP/1.0". • RFC 2068 "Hypertext Transfer Protocol -- HTTP/1.1". (Not full support). • RFC 2617 "HTTP Authentication: Basic and Digest Access Authentication".

Operating Range	• Indoors: Up to 13m (40 ft) @ 54 Mbps Up to 17m (55 ft) @ 18 Mbps Up to 37m (120 ft) @ 11 Mbps Up to 91m (300 ft) @ 1 Mbps • Outdoors: Up to 55m (180 ft) @ 54 Mbps Up to 122m (400 ft) @ 18 Mbps Up to 171m (560 ft) @ 11 Mbps Up to 533m (1,750 ft) @ 1 Mbps
Environmental Operating Range	• Operating Temperature: 0°-40° Celsius • Humidity: 8-95% non-condensing
Power Requirements	• Operating voltage: +12V DC +- 5% @ 600mA max

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Minimum System Requirements

- PC or Macintosh with Ethernet connection or PC with available USB port
- Microsoft Windows 98SE, Me, 2000, XP, Vista; Mac OS 9 or higher; Linux/BSD, Unix (USB: Windows 98SE, Me, 2000, XP, Vista)
- TCP/IP network protocol installed
- Internet Explorer 4.0+ or Netscape 4.0+

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